This thesis is an educational text for high school students. It aims to teach them how to solve typical problems concerning divisibility found in mathematical correspondence seminars and mathematical olympiad. Basic notions from the theory of divisibility are recalled (e.g. prime numbers, divisors, multiples). Criteria of divisibility by 2 to 20 are introduced, as well as diophantine equations and practical applications of prime numbers in real life. One whole chapter is dedicated to problems and exercises.